



C) Grant #3/a  
Prandf  
3.18.03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard Anthony Cox et al.  
Serial No.: 09/774,157  
Filed: 01/29/01  
Title: AIR CONTENT DETERMINATION  
Art Unit: Unassigned  
Examiner: Unassigned  
Docket No.: 7000/1  
Assistant Commissioner for Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

Sir:

Prior to examination on the merits, please enter the following amendments. Any deficiencies may be charged to Deposit Account No. 50-1047.

**IN THE CLAIMS**

Please substitute the following Claims 1-43 for claims 1-32 as originally filed:

1. An instrument for assaying the concentration of one or more of nitrogen dioxide, nitrogen monoxide and ozone in an air sample, the instrument comprising:  
an equilibrium altering means for changing the equilibrium between nitrogen monoxide and nitrogen dioxide in the presence of ozone and oxygen; and  
a first gas sensor for quantifying the concentration of a first gas selected from the group consisting of nitrogen dioxide, nitrogen monoxide or ozone;  
wherein the instrument is adapted to measure the concentration of the first gas whilst the equilibrium between nitrogen monoxide and nitrogen dioxide in the presence of ozone and oxygen is altered, and to thereby calculate the concentration of at least one of nitrogen dioxide, nitrogen monoxide and ozone in the air sample.
2. The instrument of claim 1, wherein the equilibrium altering means comprises an ultraviolet light source.